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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/506,033	02/16/2000	Yasushi Kubota	49087-CIP(820)	5865
21874	7590	08/31/2005	EXAMINER	
EDWARDS & ANGELL, LLP			TRAN, HENRY N	
P.O. BOX 55874				
BOSTON, MA 02205			ART UNIT	PAPER NUMBER
			2674	

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/506,033

Applicant(s)

KUBOTA ET AL.

Examiner

Henry N. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 18-21, 37-53 and 58-64 is/are pending in the application.
- 4a) Of the above claim(s) 37-53 and 58-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

The Amendment received June 15, 2005 has been fully considered; and this Office action is in response thereto. The indicated allowability of claims 2, 3 and 20 is withdrawn in view of the newly discovered references to U.S. Patent No. 5,894,296 to Maekawa and U.S. Patent No. 5,646,642 to Maekawa et al. Rejections based on the newly cited references follow.

***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “the pulse signal” recited in lines 3 and 5 of claim 1, and lines 5-6 and 7 of claim 18 has been used to designate both: “the pulse signal of a first input” and “the pulse signal of an output” (claim 1); or “a pulse signal for latching image data” and “the pulse signal of an output” (claim 18). It’s noted that the pulse signal of the first input and the pulse signal of the output are two different pulse signals; they are therefore should be referenced using different reference characters. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the: “a first input”, “a second input”, and “an output” recited in claim 1; “a first circuit”, “a second circuit”, and “common elements” recited in claim 2; “a power potential”, “an element”, and “the input signal” recited in claim 3; “a pulse signal”, and “an output comprising the pulse signal” recited in claim 18; “a first transfer gate”, “a second transfer gate”, and “an external signal” recited in claim 20 must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: “a first input”, “a second input”, and “an output” recited in claim 1; “a first circuit”, “a second circuit”, and “common elements” recited in claim 2; “a power potential”, “an element”, and “the input signal” recited in claim 3; “a pulse signal”, and “an output comprising the pulse signal” recited in claim 18; “a first transfer gate”, “a second transfer gate”, and “an external signal” recited in claim 20.

For the purpose of this Office action, the above claim terms are given their broadest reasonable interpretation in light of the specification. However, the applicants are required to provide a clear support or antecedent basis in the specification for each an every claim terms.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claim 1, which recites the element "the pulse signal" in line 5. There is insufficient antecedent basis for this element in the claim because the phrase “an output comprise the pulse signal” comprises “the pulse signal” that is produced from the output and is introduced the first time; it’s therefore should be identified as --a pulse signal--. However, if selecting that

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reference character (--a pulse signal--), the reference character is the same with that introduced in the preamble of claim 1 (see lines 1-2), which is a different pulse signal of the first input; and therefore a different reference character for the pulse signal of the output should be considered to avoid being considered as "indefinite".

7. Regarding claim 3, which recites the element "the input signal" in line 3. There is insufficient antecedent basis for this element in the claim.

8. Regarding claims 2-3, which are held as being indefinite because of their dependencies upon the rejected base claim 1.

9. Regarding claim 18, which recites the element "the pulse signal" in line 7. There is insufficient antecedent basis for this element in the claim. Note: the phrase "an output comprise the pulse signal" comprises "the pulse signal" introduced the first time; it's therefore should be identified as --a pulse signal--. However, the reference character is the same with that introduced in the preamble of claim 18 (see lines 1-3)

10. Regarding claims 20-21, which are held as being indefinite because of their dependencies upon the rejected base claim 18.

For the purpose of this Office action, the examiner assumes that the above elements and/or limitations are amended to overcome the rejections discussed above.

### ***Double Patenting***

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-3 and 18-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 15 and 23 of U.S. Patent No. 6,580,411. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claim invention claims the same elements and limitations provided by the patent claims. For example, regarding the present claim 1, all the elements and limitations of the present claim 1 are included in the preamble of the patent claim 1; regarding claim 2, the claim elements and limitations: "a first circuit having a voltage holding function and a second circuit having a level shifting function, the first and the second circuits being constructed so as to own some common elements" are read on the patent claim elements and limitations: the first and the second p-type transistors, and the first, the second, ... and the sixth n-type transistors recited in the patent claim 1 because they are arranged for performing a voltage holding function and a level shifting function as illustrated in Figs. 3 and 4 of the cited patent. It's clear that the present claims 1-3 and 18-20 comprise claim elements and limitations of the patent claims 1, 15 and 23, and are broader than the patent claims 1, 15 and 23, and are obvious variations from the patent claims 1, 15 and 23.

***Claim Rejections - 35 USC § 103***

13. Claims 1-3 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,894,296 to Maekawa (hereinafter “Maekawa ‘296”) in view of U.S. Patent No. 5,646,642 to Maekawa et al. (hereinafter “Maekawa ‘642”).

14. Regarding claims 1 and 18, Maekawa ‘296 teaches a shift register circuit having a plurality of latch circuits, which is a plurality of flip-flops FF, for transmitting a pulse signal, which is a start signal ST, for latching image data, VDD, in synchronization with a clock signal, CK1 and CK2, each of the latch circuits comprising: a first input comprising the pulse signal ST, a second input comprising a clock signal CK1 or CK2, for executing control to input and stop the supplied clock signal, and an output comprising an output pulse signal, OT, in synchronization with the clock signal; see Figs. 1 and 3; col. 5, lines 33-39; col. 6, lines 9-14, and lines 42-58; col. 7, lines 28-38.

However, Maekawa ‘296 does not teach the use of: (i) the clock signal has an amplitude smaller than an amplitude of the pulse signal; and (ii) the clock signal input control section to input and stop the supplied clock signal.

Maekawa ‘642 teaches a shift register circuit, which is a level converting circuit, comprising the use of: (i) the clock signal, CK1 and CK2, which have an amplitude smaller than an amplitude of the pulse signal, VB, and VB; see Fig. 2; and col. 5, lines 50-66; and (ii) the clock signal input control section, 1A and 1B, to input and stop the supplied clock signal; see Figs. 1 and 3; and col. 6, lines 13-19.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the small amplitude clock signal inputted to the clock signal input control section as



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taught by Maekawa '642 for the Maekawa '296 shift register circuit because this would provide an improved shift register circuit capable of reducing operating voltage, and able to provide stable and high-speed pulse amplification for transmitting and latching display image data; see Maekawa '642; col. 9, line 65 to col. 10, line 9.

15. Regarding claims 2-3, Maekawa '296 further teaches that: (i) each of the latch circuit comprises a first circuit having a voltage holding function and a second circuit having a level shifting function, the first and second circuits being constructed so as to own some common elements, see Fig. 3, and col. 6, lines 42-64 (Fig. 3 of Maekawa '296 shows NMOS type and PMOS type switches are connected for holding and shifting display image data VDD in response to clock signals CK1 and CK2); and (ii) the latch circuit is supplied with a power potential VSS, and NMOS and PMOS switches as an element for controlling the voltage holding function or the level shifting function of the input signal is provided between the power potential and the second circuit.

16. Regarding claim 19, Maekawa '642 further teaches the clock signal CK1 and CK2 inputted to the latch circuit is only either one of a clock signal of a specified cycle and an antiphase signal of the clock signal, see col. 5, lines 50-56.

17. Regarding claim 20, Maekawa '296 further teaches that an output signal of each of the latch circuits is inputted to the latch circuit of the succeeding stage via a first transfer gate and inputted to the latch circuit of the preceding stage via a second transfer gate, and a scanning direction is controlled by selectively making conductive the first or second transfer gate by means of an external signal provided by control means; see Fig. 3.

***Allowable Subject Matter***

18. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

19. Applicant's arguments with respect to claims 1-3 and 18-21 have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

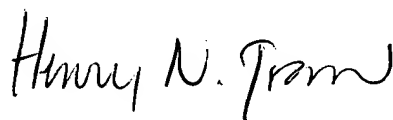
20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are U.S. Patents Nos.: 5,237,212 to Maekawa, 5,589,847 to Lewis, and 5,990,857 to Kubota et al that teaches a level converting circuit, a shift register circuit with a output buffer, and a shift register circuit for use with an image display apparatus.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry N. Tran whose telephone number is 571-272-7760. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Henry N. Tran". The signature is written in a cursive, flowing style.

Henry N Tran  
Primary Examiner  
Art Unit 2674

8/26/05